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FILE INFO

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MAY 71 04 12Z

ACTION	1	✓	6	✓	11	SB	16	✓
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25X1A

IN 73799

NRO, USAF and DIA review(s) completed.

DE [] #0018 1201749

ZNY MMNSH

R 301748Z

FM SSO DIA

TO SSO SACRECONCEN

SSO SAC

SSO CINCPAC

INFO AFSSO USAF

CNO (OP33)

COMNAVINTCOM

SSO ACSI DA

OPCEN

NPIC

AFSSO PACAF

SSO HAWAII

CINCPACFLT

ZEM

25X1A
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TOP SECRET [] [] CONTROL CHANNELS SECTION []

DC-5C 04218 APR 71.

AFSSO USAF FOR AFINYMA

25X1C

AFSSO PACAF KEEP AND PASS TO []

25X1A

NPIC FOR []

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OPCEN FOR []

SUBJ: COLOR IMAGERY IN AIRBORNE PROGRAMS

REF: A DIADC-5C MSG 03432 DTG 092104Z APR 71.

25X1A

25X1D

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ACTION	1		6		11		16	
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PAGE 2 IN 73799

B. DIADC-5C MSG 15527 DTG 201328Z NOV 70.

C. CINCPAC MSG DTG 122335Z DEC 70.

D. DIADC-5C MSG 02803 DTG 231538Z MAR 71.

E. SAC MSG DTG 081455Z APR 71.

1. THE POSSIBLE USE OF COLOR FILMS IN THE NATIONAL RECONNAISSANCE PROGRAM (NRP) HAS BEEN CONSIDERED AND INVESTIGATED FOR SEVERAL YEARS. IT IS GENERALLY AGREED THAT COLOR OFFERS THE POTENTIAL FOR PROVIDING ADDITIONAL INFORMATION IN A PHOTOGRAPH THAT IS NOT FOUND IN BLACK AND WHITE IMAGES. THIS OCCURS PRIMARILY AS A RESULT OF ADDING "SPECTRAL" RESOLUTION, OR DIFFERENCES IN OBJECTS DUE TO THEIR DIFFERENT "COLORS", TO THAT OF "SPARTIAL" RESOLUTION. UNFORTUNATELY, THE "SPARTIAL" RESOLUTION OF PREVIOUSLY AVAILABLE COLOR FILMS, SUCH AS SO-121, WAS SIGNIFICANTLY LOWER THAN THAT OF THE [REDACTED] BLACK AND WHITE MATERIAL. EVEN SO, THE IDEA PERSISTED THAT COLOR MIGHT PROVIDE AN ADDITIONAL DIMENSION TO INTELLIGENCE COLLECTION CAPABILITIES. THIS ULTIMATELY RESULTED IN THE DEVELOPMENT OF [REDACTED]

IN COLOR FILMS ARE EXPECTED IN THE NEAR FUTURE.

2. AS INDICATED IN REFERENCE A, THE IMPROVEMENTS ALREADY MADE IN COLOR MATERIALS HAVE BEEN SUFFICIENTLY GREAT THAT THE NATIONAL

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	3	8	13	18
	4	9	14	19
	5	10	15	20

PAGE 3 IN 73799

RECONNAISSANCE OFFICE (NRO) ESTABLISHED A COLOR TASK FORCE (CTF) TO INVESTIGATE THE POTENTIAL USES OF THESE NEW FILMS IN THE NRP AND TO DETERMINE THE IMPACT THIS MIGHT HAVE ON THE INTELLIGENCE COMMUNITY. THE CTF IS ATTEMPTING TO BUILD A BASE OF IMAGERY AND INFORMATION WHICH CAN BE USED TO MAKE THESE JUDGEMENTS. TO THIS

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	2		7		12		17	
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PAGE 4 IN 73799

3. THE POTENTIAL VALUE OF USING THESE NEW COLOR FILMS IN HIGH ALTITUDE AIRBORNE PROGRAMS, AS WELL AS IN KH MISSIONS, ALSO NEEDS

TO BE INVESTIGATED. WHILE [REDACTED] COVERAGE CAN PROVIDE SOME DATA TO SUPPORT THIS STUDY, THE ACQUISITION OF OPERATIONAL IMAGERY WOULD OBVIOUSLY PROVIDE THE BEST SOURCE OF INFORMATION. THE

POSSIBILITY OF INCLUDING [REDACTED] COLOR FILMS IN GIANT

SCALE MISSIONS OPERATING IN SOUTHEAST ASIA WAS PROPOSED IN REFERENCE

B. THE CINCPAC RESPONSE (REFERENCE C.) INDICATED NO OBJECTION TO

THE USE OF COLOR FILMS IN THE [REDACTED]

SINCE THE IMPACT ON THE COLLECTION/PROCESSING/EXPLOITATION CYCLE

WOULD BE MINIMAL COMPARED TO THE PRIMARY GS CAMERA SYSTEMS IN

THE EVENT CINCPAC WAS UNABLE TO PROCESS COLOR FILMS, DIA AUTHORIZED,

BY REFERENCE D, THE USE OF [REDACTED] BLACK AND WHITE

FILMS IN THE [REDACTED] SEA GIANT SCALE MISSIONS, AT THE DISCRETION

OF SAC, AS THE FIRST STEP IN OBTAINING OPERATIONAL IMAGERY FROM

THIS PROGRAM. REPRESENTATIVES OF THE MC&G COMMUNITY HAVE ALREADY

EXPRESSED INTEREST IN EVALUATING [REDACTED] IMAGERY FROM THESE

MISSIONS FOR THEIR PURPOSES. HOWEVER, DUE TO THE NATURE OF THIS

CAMERA SYSTEM, [REDACTED] IMAGERY IS NOT REPRESENTATIVE OF THE PRIMARY

GS CAPABILITY. THEREFORE, THE USE OF COLOR FILMS IN THE [REDACTED]

[REDACTED] CAMERA SYSTEMS MUST BE

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	2	7	12	17
	3	8	13	18
	4	9	14	19
	5	10	15	20

PAGE 5 IN 73799

25X1A

25X1B

CONSIDERED. THE COMPATABILITY OF ☐ WITH THE ☐ HAS BEEN DEMONSTRATED BY SAC THROUGH DOMESTIC TEST FLIGHTS. THUS, IT WOULD BE DESIRABLE TO FLY OPERATIONAL GS MISSIONS IN SEA USING

☐ IN AT LEAST ONE ☐ SINCE COLLECTION REQUIREMENTS REMAIN THE PRIMARY CONSIDERATION ON EACH GS MISSION, A SUITABLE MIX OF COLOR AND BLACK AND WHITE FILMS MUST BE ESTABLISHED. SUCH A MIX WOULD ALSO ALLOW COMPARISON OF THE VALUE OF COLOR VS BLACK AND WHITE IMAGERY ACQUIRED UNDER SIMILAR CONDITIONS. IF THE ☐ ALSO PROVES TO BE COMPATIBLE WITH ☐ A SIMILAR SERIES OF GS MISSIONS SHOULD BE FLOWN USING THIS COMBINATION.

25X1D

25X1D

4. THE EVALUATION OF ☐ IN SEVERAL GIANT NAIL MISSIONS IS ALSO DESIRABLE. ☐ TEST FLIGHTS WITH THE U-2/IRIS II/ ☐ SHOW REASONABLY GOOD RESULTS EVEN THOUGH THE LENS IS NOT FULLY COLOR CORRECTED. SEVERAL FRAMES FROM ONE OF THESE FLIGHTS HAVE BEEN FORWARDED FOR YOUR REVIEW.

5. THE POSSIBILITY OF USING GIANT SCALE EMR MISSIONS TO OBTAIN OPERATIONAL COLOR IMAGERY (DMZ AREA) HAS ALSO BEEN SUGGESTED. BY REFERENCE E., SAC FORWARDED TO DIA (FOR ACTION) AN RADC REQUEST FOR COLOR IMAGERY ☐ TO BE ACQUIRED ALONG THE DMZ AREA OF NORTH KOREA AND FORWARDED TO RADC FOR THEIR EVALUATION.

6. IN ATTEMPTING TO ACQUIRE A BASE OF OPERATIONAL COLOR IMAGERY BY THE MEANS INDICATED ABOVE, IT IS DESIRED THAT THE IMPACT ON THE

PRIMARY COLLECTION OBJECTIVES AND SUGGESTED ACTIVITIES

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	2	7	12	17
	3	8	13	18
	4	9	14	19
	5	10	15	20

PAGE 6 IN 73799

BE MINIMIZED. A REVIEW OF COLLECTION REQUIREMENTS IN THE IROL, AS OF 31 MARCH 1971, INDICATES A TOTAL OF 1021 TARGETS (INDIVIDUAL TARGETS/ROUTE SEGMENTS) IN SOUTHEAST ASIA (342/LAOS, 383/NVN, 296/CAMBODIA) FOR WHICH COLOR COVERAGE IS DESIRED ON AN ANNUAL BASIS. IT MIGHT BE THAT THE PROPOSED COLOR GS/GA MISSIONS COULD BE USED TO SATISFY SOME OF THESE REQUIREMENTS AS WELL AS THE RADC REQUEST. DIA ANALYSTS HAVE ALSO RECENTLY SUBMITTED A REQUEST FOR COVERAGE OF U.S. POW CAMPS IN NVN WHICH INCLUDED A NEED TO ANSWER SOME COLOR-RELATED QUESTIONS WHICH GIANT SCALE MISSIONS MIGHT BE ABLE TO SATISFY IN PART. IN ADDITION TO CONSIDERING THE IMPACT ON COLLECTION REQUIREMENTS, THE EXPLOITATION OF COLOR IMAGERY SHOULD BE ACCOMPLISHED USING THE SAME PROCEDURES, AS NEARLY AS POSSIBLE, AS WHEN HANDLING THE USUAL BLACK AND WHITE MISSIONS. THUS, THE PROCESSING, DUPLICATION, AND READOUT OF COLOR GS AND GA MATERIALS SHOULD BE ACCOMPLISHED BY THE REALIZING BOTH AND ADDED UNSCHEDULED COSTS WHICH EVEN A FEW COLOR MISSIONS WOULD INCUR AND AT THE SAME TIME UNDERSTANDING THE VALUE OF SUCH A COLLECTION EFFORT IN SUPPORTING THE CURRENT STUDY OF COLOR MATERIALS, THE NRO HAS INDICATED CONCURRENCE IN PROVIDING THE NECESSARY COLLECTION/DUPLICATING FILMS, CHEMISTRY, PROCESSING INSTRUCTIONS, AND TECHNICAL ASSISTANCE FOR A LIMITED NUMBER OF GIANT/SCALE/GIANT NAIL COLOR MISSIONS. THE NUMBER OF SUCH MISSIONS WHICH CAN BE SUPPORTED WOULD BE DETERMINED BY THE NRO AFTER REVIEW OF THE SCOPE OF THE PROPOSED REQUEST. THE EFFORT COULD BE MINIMIZED

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	4		9		14		19	
	5		10		15		20	

PAGE 7 IN 73799

TO SOME EXTENT BY PROVIDING ONLY SELECTED RECIPIENTS OF GS/GA MATERIALS WITH COLOR DUPLICATES, WITH THE REMAINING CUSTOMERS RECEIVING BLACK AND WHITE COPIES FROM THE "GREEN" RECORD.

7. TO SUMMARIZE, AN INVESTIGATION IS BEING CONDUCTED TO DETERMINE WHETHER THE RECENTLY IMPROVED COLOR FILMS WOULD BE USEFUL IN SATISFYING NATIONAL AND THEATER REQUIREMENTS FOR IMAGERY COLLECTION/EXPLOITATION. TO ASSIST IN THIS EFFORT, IT IS DESIRABLE THAT OPERATIONAL COLOR IMAGERY BE COLLECTED FROM VARIOUS AIRBORNE PROGRAMS TO SUPPLEMENT THE KH COLLECTION ACTIVITIES. 25X1D TO THIS END, IT IS REQUESTED THAT THE FOLLOWING INFORMATION BE PROVIDED TO DIADC-5C BY SAC/CINCPAC (AS INDICATED):

A. SAC:

(1) RECOMMEND A COLOR/B&W FILM LOAD COMBINATION, INCLUDING IN AT LEAST ONE FOR GIANT SCALE MISSIONS IN SOUTHEAST ASIA. INDICATE THE PROPOSED TRACK(S) WITH CONSIDERATION TO CURRENT COLLECTION REQUIREMENTS AND RECOMMENDATIONS FROM CINCPAC/OTHER USERS. INCLUDE FOOTAGE FIGURES FOR THE AMOUNT OF FILM REQUIRED.

(2) RECOMMEND PROPOSED TRACK(S) FOR GIANT NAIL MISSIONS TO BE FLOWN USING FILM WITH CONSIDERATION TO CURRENT COLLECTION REQUIREMENTS AND RECOMMENDATIONS FROM CINCPAC/OTHER USERS. INCLUDE FOOTAGE FIGURES FOR THE AMOUNT OF FILM REQUIRED. 25X1D

(3) RECOMMEND A COLOR/B&W FILM LOAD COMBINATION, INCLUDING

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	3	8	13	18
	4	9	14	19
	5	10	15	20

PAGE 8 IN 73799

IN AT LEAST ONE [] FOR GIANT SCALE EMR MISSIONS IN KOREA.

INDICATE THE PROPOSED TRACK(S) WITH CONSIDERATION TO CURRENT COLLECTION REQUIREMENTS, THE RADG REQUEST (REFERENCE E.), AND RECOMMENDATIONS FROM CINCPAC/OTHER USERS, INCLUDE FOOTAGE FIGURES FOR THE AMOUNT FO [] OR OTHER COLOR FILMS REQUIRED.

(4) ADVISE AS TO CAPABILITY OF THE GS TECH OBJECTIVE CAMERA TO ACCEPT [] FILM.

B. CINCPAC:

(1) RECOMMEND TO SAC ANY SPECIFIC TARGET AREAS FOR WHICH COLOR COVERAGE IS DESIRED THAT MIGHT BE COLLECTED BY GS OR GA MISSIONS IN SEA OR BY EMR (GS) MISSIONS IN KOREA.

(2) ADVISE AS TO WHEN COLOR PROCESSING/DUPING CAPABILITY WILL BE AVAILABLE AT THE []

(3) ADVISE AS TO THE NUMBER OF FILM DUPES OF GS OR GA MISSIONS WHICH WOULD BE REQUIRED FOR CINCPAC UNITS IN COLOR. THIS SHOULD BE KEPT TO A MINIMUM TO REDUCE THE COST OF SPECIAL DUPE MATERIALS AND CHEMISTRY. REMAINING CUSTOMERS WOULD RECEIVE BLACK AND WHITE COPIES MADE FROM THE GREEN RECORD.

8. THE OUTCOME OF THESE ACTIONS COULD HAVE CONSIDERABLE IMPACT ON FUTURE IMAGERY COLLECTION/EXPLOITATION ACTIVITIES IN BOTH DOD AND NATIONAL PROGRAMS. YOUR SUPPORT IN THIS EFFORT WOULD BE GREATLY APPRECIATED.

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